



CHEM GUARD S-106A

High Performance Cationic Fluorosurfactant

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Product Description

Chemguard S-106A is a cationic fluorosurfactant of the fluoroalkyl ammonium chloride type. It provides surface tensions as low as 19 dynes/cm in hard water at low concentrations. Chemguard S-106A imparts excellent wetting, spreading, leveling, and flow control properties on various types of water-based systems compatible with cationic surfactants. For ease of handling, Chemguard S-106A is formulated as a 30% actives solution which can be diluted directly with water.

Attributes

- Provides low surface tension for hard water at low concentrations
- Excellent leveling agent
- Excellent for wetting contaminated or difficult to coat surfaces
- Stable at high and low pH and at elevated temperatures
- More chemically stable than typical hydrocarbon surfactants

Typical Properties¹

Appearance	Clear, pale yellow liquid	
Ionic Character	Cationic	
Percent Solids (Actives)	30%	
Diluent Composition	Water/Hexylene Glycol 60:10	
Density (25°C)	1.14 g/ml	
Flash Point (Pensky-Martens, closed cup)	>100°C (212°F)	
pH	7.0-8.0	
Boiling Point	100°C (212°F)	
Aqueous Surface Tension dynes/cm (mN/m), 25°C (77°F), Kruss Tensiometer K100	0.1% Solids in DI Water	28.6
	0.1% Solids in Brine	18.7
Foam Height, mm, Initial/5 min. at 49°C (120°F) Ross-Miles Test, ASTM D-1173-53	Solvent	0.1%
	Water, DI	114/109
Draves Wetting Test, seconds at 25°C (77°F) ASTM D-2281-68	300 ⁺	

¹Not for specification purposes.

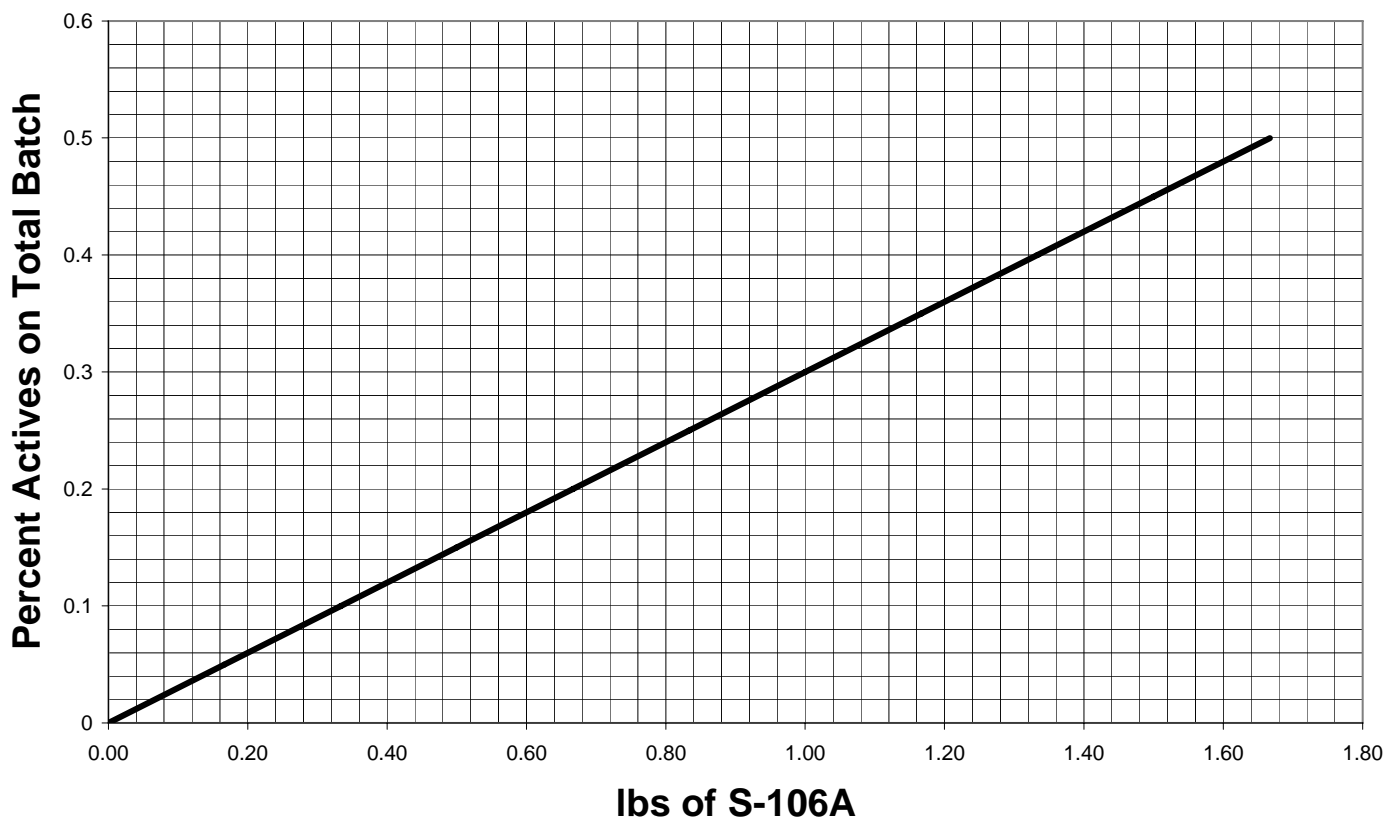
Typical Applications

Chemguard S-106A is a dilute solution composed of 30% active fluorosurfactant in a water and solvent miscible diluent. Typical uses include cleaning products where it provides leveling, wetting/penetration, good foaming and streak-free drying. These advantages also find use in floor polishes, paints and coatings, adhesives, inks, waxes, caulks.

Fluorosurfactants such as Chemguard S-106A are much more chemically stable than typical hydrocarbon surfactants, particularly in the presence of acids, alkalis, or heat.

Recommended application rates depend on the formulation makeup but typical levels of 0.01% to 0.5% are common. The chart below will aid in determining the amount of Chemguard S-106A that is required for a targeted level of active surfactant concentration. The ideal method for determining the proper level is to screen several ranges of concentrations to achieve the desired effect on the surface tension and wetting action.

Addition Rate of S-106A for 100 lb. Batch



Solubility

Chemguard S-106A is soluble in water and most organic solvents. The chart below is an example of the solubility of S-106A in many solvent systems. Chemguard can assist in determining solubility in any system.

Solvent	Grams of Chemguard S-106A/ 100 grams of solvent
Distilled Water	>2
Isopropanol	>2
1:1 Water/Isopropanol	>2
Methyl Alcohol	>2

All values measured at 25°C

Storage and Shelf Life

Chemguard S-106A should be stored between 10°C and 50°C. Some solids begin to separate at temperatures below -6°C over time. If frozen or if solids separate, warm to room temperature before use. Freezing and thawing will not affect the properties or performance.

Shelf life is at least one year if stored tightly sealed in the original container at temperatures below 50°C (151°F).

Health and Safety

Chemguard S-106A Fluorosurfactant is intended for use in contained and non-dispersive applications. Chemguard does not recommend this product for use in applications involving repeated exposure to skin contact, inhalation, or ingestion. This product is not intended to be used for medical, cosmetic, food or pharmaceutical applications.

Chemguard Fluorosurfactants do not contain PFOS, PFOA or derivatives that decompose them. All perfluoro-intermediates are derived from the telomerization process.

Please refer to the material safety data sheet (MSDS) for recommended disposal, handling, and protection information.

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